

Notice of Allowability

Application No.

10/669,798

Examiner

Tara L. Mayo

Applicant(s)

STOECKER ET AL.

Art Unit

3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 03 March 2006.
2. ☒ The allowed claim(s) is/are 29-36.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>20060303</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Rocco S. Barrese on 12 May 2006.

The application has been amended as follows:

--29. (Currently Amended) A method for delivering cooling water to a power plant having condensers, the proper functioning of which require cooling, said method comprising the steps of:

(i) extending a first pipe group of an open loop geothermal heat exchange system comprising at least one first pipe having a proximal end and a distal end substantially horizontally under the bottom of a water reservoir for a first predetermined distance from the shore of said water reservoir and for a first predetermined depth under the bottom of said water reservoir, said bottom constituting a predominantly sandy substrate;

(ii) extending a second pipe group of the open loop geothermal heat exchange system comprising at least second first pipe having a proximal end and a distal end substantially horizontally under said bottom of said water reservoir for a second predetermined distance from the shore of said water reservoir and for a second predetermined depth under said bottom of said

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water reservoir, said second predetermined distance and depth being different from said first predetermined distance and depth;

(iii) delivering ground water from under the bottom of said water reservoir to said power plant for cooling said condensers by inducing a low downward velocity gradient over the distances and depths of the first and second pipe groups and creating a negative pressure along the proximal ends of at least one of the first and second pipes sufficient to draw ground water from under the bottom of the water reservoir through said predominantly sandy substrate and into at least one of the first and second pipes through a filtering assembly associated with said first and second pipes and drawing ground water essentially free from planktonic organisms into said at least one of the first and second pipes [wherein ground water drawn into said first and second pipes is at different temperatures];

(iv) cooling said condensers with the delivered cooling water; and

(v) discharging the cooling water from said power plant into the water reservoir at temperatures substantially preventing detrimental plumes, wherein heat conduction between the supply and discharge water is prevented by the sandy substrate which acts a natural thermal barrier.--.

--33. (Currently Amended) An open loop geothermal heat exchange system [cooling water intake system] comprising a delivery assembly configured to deliver cooling ground water from under the bottom of a water reservoir to a power plant having condensers, the proper functioning of which require cooling, the delivery assembly comprising:

(i) a first pipe group comprising at least one first pipe having a proximal end and a distal end substantially horizontally under the bottom of a water reservoir for a first predetermined distance from the shore of said water reservoir and for a first predetermined depth under the bottom of said water reservoir, said bottom constituting a predominantly sandy substrate;

(ii) a second pipe group comprising at least second first pipe having a proximal end and a distal end substantially horizontally under said bottom of said water reservoir for a second predetermined distance from the shore of said water reservoir and for a second predetermined depth under said bottom of said water reservoir, said second predetermined distance and depth being different from said first predetermined distance and depth, wherein a low downward velocity gradient is induced over the distances and depths of the first and second pipe groups;

(iii) a pump assembly in flow communication with the proximal ends of said first and said second pipes and configured to create a negative pressure along the proximal ends of said first and second pipes sufficient to draw ground water from under the bottom of the water reservoir through said predominantly sandy substrate and into said first and second pipes through a filtering assembly associated with said first and second pipes, [wherein ground water drawn into said first and second pipes is at different temperatures,]and deliver said ground water free from planktonic organisms to said condensers for cooling thereof; and

(iv) means for discharging the delivered ground water to said water reservoir after cooling said condensers without causing detrimental thermal plumes, wherein heat conduction between the supply and discharge water is prevented by the sandy substrate which acts a natural thermal barrier.--.

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2. The following changes to the drawings have been approved by the examiner and agreed upon by applicant: The discharge pipe (70) shown in Figure 2 will be corrected such that it extends to the water reservoir (54) as recited in the claims. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tara L. Mayo whose telephone number is 571-272-6992. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 571-272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TLM

12 May 2006



MEREDITH C. PETRAVICK
PRIMARY EXAMINER